

Summary

This invention describes the combination of SSFP, a method for accelerating data acquisition, and an eddy current compensation method. This synergistic combination allows acquisition of images with high signal-to-noise ratio, high image contrast, high spatial and temporal resolutions, and good immunity against system instabilities. *k-t* BLAST and *k-t* SENSE are the preferred method for accelerating data acquisition, since they allow high acceleration factors, but other methods such as parallel imaging and reduced field-of-view imaging are also applicable. Typical applications of this invention include cine 3D cardiac imaging, and 2D real-time cardiac imaging.

(Fig. 3)